

DEPARTMENT OF
EDUCATION AND SCIENCE

 **EDUCATION
FOR EMPLOYEES**
**AN HMI SURVEY
OF PART-TIME RELEASE
FOR 16-19 YEAR OLDS**

REFERENCE ONLY

THIS BOOK MAY NOT BE
TAKEN OUT OF THE LIBRARY

HER MAJESTY'S
STATIONERY OFFICE



© Crown copyright 1984
First published 1984
ISBN 0 11 270397 6

CONTENTS

	<i>Page</i>
1 Introduction	1
Nature and purpose of inspection	1
Size and nature of sample	1
Background to part-time release	4
Pattern of part-time release	7
2 Resources	11
Teaching staff	11
Technicians	12
Accommodation	13
Equipment and materials	14
Libraries	14
Communal facilities and social activities	15
Organisation and management	15
3 Examining bodies and the curriculum	18
Background	18
Examining and validating bodies	19
4 Teaching and learning	22
The college day	22
Teaching and learning	24
Syllabus content	32
Assessment	33
Personal and social development	37
Staff expectations of students	38
5 Progression and withdrawal	39

continued

6	Colleges and employers	43
	Links with industry	43
	Recruitment to jobs	45
	Recruitment to and placement on courses	49
	Transition from school to work and college	51
	Employer policies and day release	52
7	Perceptions and issues	54
	Appendices	58

1 Introduction

Nature and purpose of inspection

1. This report is about the education of 16–19 year olds who are released from employment to attend establishments of further education in England. It highlights elements of common practice and uses specialist examples as illustrations. It is based upon the knowledge of HMI working in the field of further education and, in particular, on evidence obtained during an inspection of part-time release courses which was carried out in 41 colleges from the autumn term of 1980 to the end of the summer term 1982. At a time when the organisation and implementation of post-16 education were the focus of national interest, it was thought timely to undertake inspection of part-time release courses as they represented a long established and traditional mode of further education. There were important developments and substantial curricular changes within and bearing on the further education system during the preceding two decades. The Technician Education Council (TEC) and the Business Education Council (BEC) were established. The City and Guilds of London Institute (CGLI) developed innovatory courses. New styles of examination were introduced. The Manpower Services Commission (MSC) was established and sponsored training initiatives.
2. The inspection coincided with a period of economic recession when fewer employment opportunities were available to young people, and as a result, enrolments on part-time release courses had fallen. This decline had been accompanied, however, by an increase in recruitment for full-time provision, as illustrated in Figure 1 which refers to the period 1973–1982 for England and Wales.

Size and nature of sample

3. The inspection concentrated on a sample of non-advanced further education courses attracting large numbers of students in business studies, construction, engineering, food, hairdressing and

Figure 1 – *Estimated economic activities of young people aged 16–19 as at January in academic years 1973–74 to 1981–82 (per cent) England and Wales*

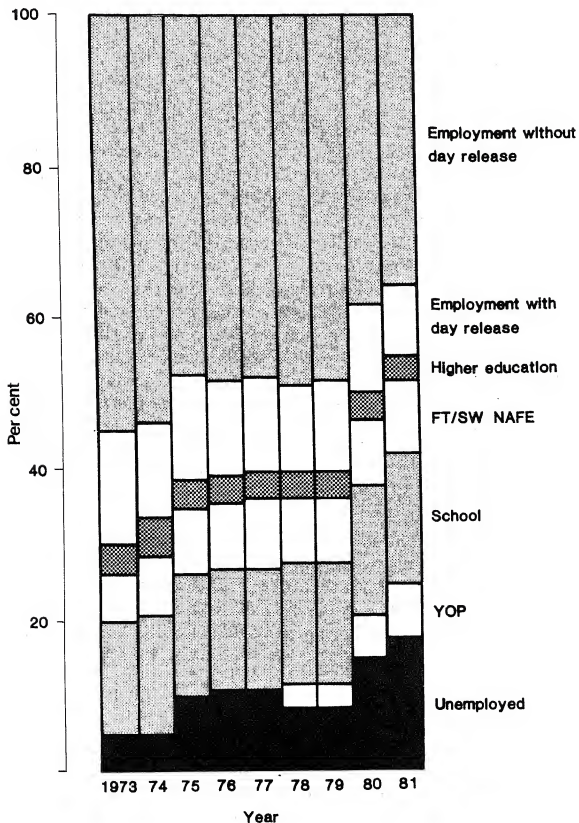


Table 1 *Distribution of samples by economic planning regions*

Economic planning region	Population (millions)	Colleges in sample	Subject areas inspected										Number of employers visited							
			Business studies	Construction	Engineering	Food	Industrial science	Handdressing	Agriculture	General studies	Maths	Business studies	Construction	Engineering	Food	Industrial science	Handdressing	Agriculture		
Northern	3.3	4	2	3	3	1	1	1	—	4	1	—	5	13	6	2	—	—	26	
Yorks and Humberside	4.8	4	3	3	4	3	3	1	1	3	1	3	3	14	11	5	3	20	59	
North West	6.6	6	3	3	5	4	1	3	1	4	1	3	6	30	16	—	8	20	83	
East Midlands	3.4	5	4	3	5	2	1	3	1	4	1	6	—	21	13	2	7	15	64	
West Midlands	5.0	4	2	2	4	2	1	1	—	3	1	4	15	22	4	1	—	—	47	
East Anglia	1.7	2	1	2	2	2	—	1	—	1	1	5	—	2	9	—	4	—	20	
South East	17.3	12	9	5	11	6	7	2	3	10	1	22	13	39	32	—	4	24	134	
South West	3.8	4	2	4	3	4	1	3	1	4	1	7	28	18	12	13	6	20	104	
Total	45.9	41	26	25	37	24	15	15	7	33	8	50	70	159	103	23	33	99	537	

industrial sciences. Supplementary inspections were made of certain agriculture/horticulture courses and of the mathematics and general/communication studies associated with the vocational areas inspected.

4. Of the 41 colleges involved in the inspection, six were in Greater London, 10 in Metropolitan Districts and 25 in non-Metropolitan Counties. They were widely distributed throughout England. 13 colleges were in large cities, 15 in towns and 13 in rural environments. The distribution, by Economic Planning Region, of the colleges and subject areas inspected is shown in Table 1. A list of the main courses inspected is shown in Appendix 1. Comparisons of the sample colleges with all colleges in terms of level of work, mode of study, age group of students enrolled and distribution of day release enrolments by industry are shown in Figures 2 and 3. The sample shows a bias in favour of colleges concerned with non-advanced further education, particularly part-time release students and 16–19 year olds. Preliminary visits to the 41 colleges were followed by the main inspection which involved a small team comprising five HMI on average and usually lasted for a week. Follow-up visits were made to colleges where good features of day-release provision or practice had been identified by HMI. All colleges were revisited in the academic year following the main inspection to collect data on examination results and student drop-out. Visits were also made to a representative sample of those employers who released their employees to attend part-time courses (Table 1). Over 500 such employers were visited.

5. Inspection was particularly directed towards the curriculum, the quality of teaching and of learning and assessment, and to the identification of the different perceptions of employers, teachers and students about part-time release provision. HMI also spent whole days with groups of students to evaluate their total experience during a day in college.

Background to part-time release

6. The practice of releasing young workers from employment to further education dates from the latter part of the nineteenth

Figure 2 – Comparison of sample colleges with all colleges by level of work, mode of study and age group of students enrolled (session 1979–80) England and Wales

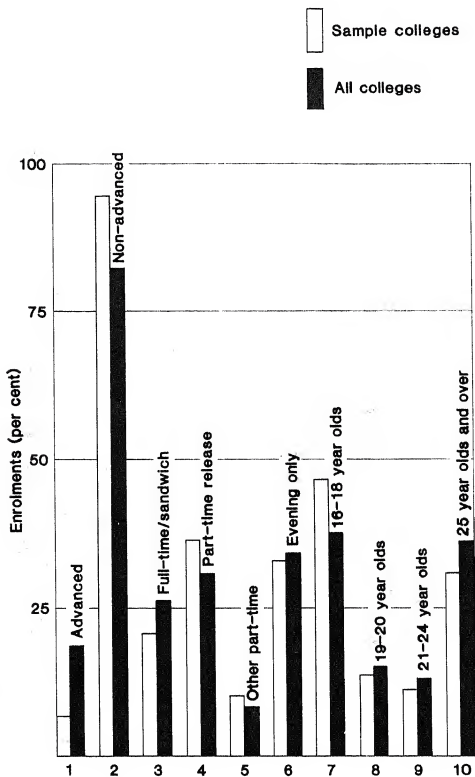
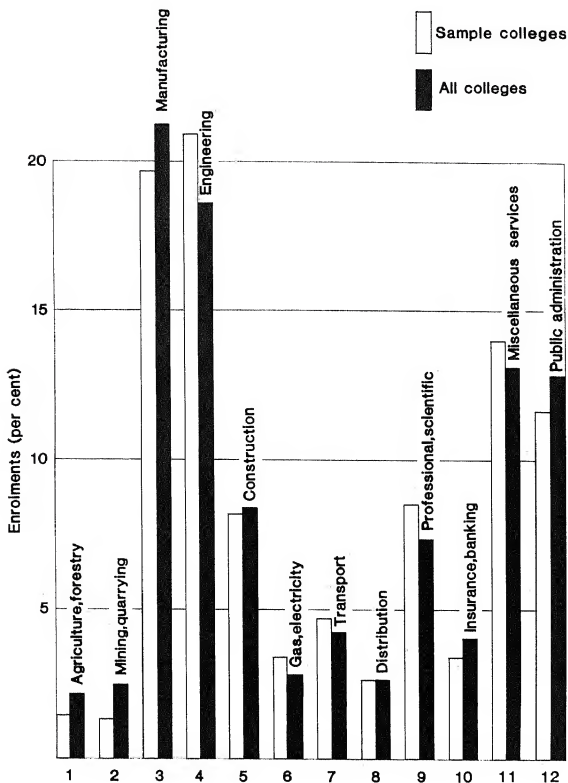


Figure 3 – Comparison of sample colleges with all colleges; distribution of day and block release enrolments by industry of employer (session 1979–80) England and Wales



century when some apprentices were permitted to attend establishments such as Mechanics' Institutes in order to receive technical instruction related to their trades. It was not until 1945, however, that part-time release for education became established on a national scale. In the next decade enrolments grew rapidly as a consequence of the emphasis given to the importance of educating young people in employment. A series of government initiatives followed which attempted to promote a wider range of opportunities for further education and training. Significant landmarks were the 1961 White Paper *Better opportunities in technical education* (Cmnd 1254), the 1964 Industrial Training Act and the 1973 Employment and Training Act.

7. It was generally believed that these measures would lead to an increase in day-release students. In fact, the number of young workers in the 16–19¹ age group who were released for further education fell from 327,000 in 1966 to 201,000 in 1981 during a period when the population of the age group rose from over two million to just under two and a half million. The causes of this decrease in student numbers are various. For financial reasons and as a consequence of technological change some employers, particularly in those sectors such as manufacturing, engineering and construction reduced their level of recruitment. Other employers continued to be unwilling to release their trainees, especially girls, for study. In the 1981–82 session only 28,000 girls aged 16–19 were granted day release from employment to attend FE courses. In the same session 173,000 boys in the same age range were granted release. Students given day-release by the service industries sector increased but this growth failed to compensate for the decline in the recruitment in manufacturing, engineering and construction as the data in Table 2 illustrate.

Pattern of part-time release

8. Part-time attendance is on either a day release or block release basis. Day release students usually attend college for one full day, (or two half days a week). Block release students attend full-time

¹ Includes those aged 16, 17 and 18 years at 31 December of the year in question

Table 2 *Students released by employers to attend FE courses (England and Wales)*

Sector	Thousands	
	1966	1980
Manufacturing	151	108
Engineering	138	95
Construction	75	47
Others	147	122
Insurance/banking	7	30
Miscellaneous services	48	65
Public administration/defence	60	77
Total	626	544

during one 12-week block or three periods of four weeks during the college year; in some colleges continuity of study on block release courses is sustained by requiring students to attend on one evening a week throughout the academic session. Release for further education is granted voluntarily by employers and employees normally receive pay while attending college. Most of those attending part-time release courses are serving apprenticeships or are undergoing training for skilled or professional occupations. Part-time release students are generally prepared for the examinations of bodies such as the CGLI, the Regional Examining Bodies (REB), TEC, BEC, and the Royal Society of Arts (RSA). The estimated number of students aged 16–19 released by their employers during working hours to attend part-time courses at further education colleges in England and Wales during the period of the inspection are shown in Table 3. Other activities of the age group are shown for comparison. During the course of the inspection the proportion of the 16–19 age group receiving day-release from employment for further education fell from 10.6 to 8.1 per cent. (Boys 17.3 to 13.6 per cent, girls 3.6 to 2.3 per cent.)

9. In 1980 there were 580 maintained, assisted or grant-aided establishments classified as major establishments of further

Table 3 *Estimated activities of young people aged 16–19 as at January in academic years 1980–81 and 1981–82 England and Wales (DES statistical bulletin 2/83)*

	1980–81			1981–82		
	Boys	Girls	Total	Boys	Girls	Total
Full-time education						
School	203	203	406	219	219	438
FT and SW NAFE	92	138	230	103	156	259
HE	44	33	77	47	35	82
In employment						
With day study	233	58	291	200	52	252
(of whom on day release)	(217)	(43)	(260)	(173)	(28)	(201)
No day study	436	537	973	387	469	856
YOP	68	65	133	91	88	179
Unemployed	178	159	337	224	191	415
Total population						
of which on evening study	1254	1193	2447	1271	1210	2481
	102	147	249	95	150	245

education in England and Wales. Most colleges of further education have an organisational structure based on specialist departments of engineering, business studies, etc. Students attending part-time release courses tend to remain attached not only to a particular department but often to a section within it concerned with a specific area of work within the department which caters for their particular need. For example, trainees in electrical contracting may experience little or nothing of mechanical and production engineering.

10. The range and variety of provision available to students attending colleges on a part-time day-release basis are very broad and are discussed more fully in section 3. Provision is based upon a spectrum of courses of a vocational and technical nature which are

intended to complement training and provide the basic knowledge and skill necessary for specific occupations. The main categories of part-time release courses inspected were those provided for craft and technician students and similar levels of work in business studies.

11. Establishments of further education usually offer a wide range of general and pre-vocational courses and many of them are available to part-time release students. For instance, employees may take a course in one or more subjects at Ordinary (O) or Advanced (A) level of the General Certificate of Education (GCE) but the numbers doing so are generally low. A small minority of employees also attend college for operative courses and courses in secretarial and office skills and the latter may take examinations offered by the RSA, the Pitman Examinations Institute or the London Chamber of Commerce and Industry (LCCI).

2 Resources

12. Teaching and ancillary staff, accommodation, equipment and materials are allocated to a college by its local education authority on the basis of student enrolments. Control is exercised through a college governing body which typically would include representatives of the local education authority, local industry and commerce, industrial training boards, teaching staff from the college and local schools and college students. The size of the governing body usually reflects the size of the college. The management of the college is the responsibility of the principal who is assisted in the discharge of his office by an academic board. Most colleges have a vice-principal and are organised on a departmental basis although a minority of colleges have introduced alternative structures. Employers of part-time release students are represented on the governing bodies of all 41 colleges inspected.

Teaching staff

13. In 1980 in the 580 major establishments of further education there were 80,000 teachers of whom 42 per cent were graduates or graduate equivalents and 56 per cent held teaching qualifications. 47,000 of the 61,000 employed in major establishments excluding polytechnics were men. The younger staff tend to be the more highly qualified. Of the teaching staff in major establishments excluding polytechnics 10 per cent are graded Principal Lecturer and above, 24 per cent are Senior Lecturers, 28 per cent are Lecturers Grade 2 and 37 per cent are Lecturers Grade 1. In the colleges visited there was a lower proportion of graduates (36 per cent) and a smaller proportion of posts at the grade of Principal Lecturer and above (7 per cent). The proportion of staff holding teaching qualifications to complement industrial experience was approximately 50 per cent.

14. Teachers are generally assigned to departments which vary in size and number from college to college. One college inspected had eleven departments while others had only two. Larger institutions often group departments together within a faculty structure.



Smaller departments had as few as 10 full-time teaching staff and larger ones over 50. The latter are often organised on the basis of sections which have responsibility for a specific area of work. For example, an engineering department in the south east had 52 teaching staff and over 1,500 students across three sections: motor vehicle engineering, electrical and electronic engineering and mechanical and production engineering; these had 14, 19 and 18 teachers, respectively. Each section was led by a Principal Lecturer who, with the Head of Department of Engineering, formed the departmental management team.

15. There are wide variations between colleges and even between departments of the same college in the proportions of graduates or graduate equivalents to teacher trained staff. For example, in a London college 23 of the 24 staff in its science department had graduate qualifications and 10 were teacher trained, while in the engineering department mentioned earlier there were 12 graduates and 17 who were teacher trained. In one section of this department none of the 14 staff was a graduate or graduate equivalent.

16. Although a substantial proportion of further education teaching staff have had some form of commercial or industrial experience little of it is comparatively recent. Although many principals and heads of department said that they recognised the value of relevant and current industrial experience, few had made effective arrangements for staff to spend time in industry.

Technicians

17. Technicians provide an essential support service for the specialist activities of the college departments. Those having courses with a high proportion of practical work involving the use of machinery and equipment in workshops and laboratories have a greater need for technicians than those whose courses take place mainly in the classroom. The ratio of full-time equivalent teaching staff to full-time equivalent technicians varies between 3 to 1 for science and technology to 20 to 1 for business and general studies. This disparity of technician support should be reduced because of

the impact of information technology on the business curriculum. The level of technician support varied widely in the colleges and departments inspected even where needs were similar. Furthermore, in some colleges up to 20 per cent of the established technician posts were left unfilled in order to save money. As a result teachers are diverted from their main function; maintenance of laboratories, workshops, machinery and equipment may be affected and less practical work is done by the students.

Accommodation

18. There is great variation in the quality and suitability of the accommodation used for part-time release education. The buildings range from recent purpose-built accommodation to unsuitable annexes which are often dilapidated and limit the scale of practical work. Most colleges have a wide range of specialist accommodation. Facilities are generally well looked after if they are identified with, and are the responsibility of, specific members of staff. By contrast many general purpose classrooms are dull, impersonal and dispiriting. Changing patterns of enrolment have also made it difficult for some specialist provision to be used solely for its original purpose and pressure on space results in both laboratories and workshops being used as unsuitable and uncongenial classrooms.

19. Some colleges have been able to provide specialist accommodation for mathematics and general and communication studies. For example, the construction department in a college in the south west provides specialist accommodation, appropriately equipped, for the teaching of mathematics within construction courses. Colleges in London and Hampshire have mathematics workshops to which day release students in need of remedial help may be referred and where they may work at their own pace. About half the colleges inspected provided accommodation for the teaching of general and communication studies in the form of specifically equipped communication workshops or rooms used more or less exclusively for this subject. The status of general and communication studies was enhanced when specialist accommodation was provided for this component of the curriculum.

Equipment and materials

20. Specialist rooms, laboratories and workshops were generally well-equipped. In recent years further education colleges have provided a large proportion of their full-cost courses for training boards, the Manpower Services Commission and employers. The income from these courses has helped finance staffing, equipment and materials and has been used to provide a wider range of modern equipment for all students. In one college, 30 per cent of the revenue income arose from this source. Colleges with a substantial fee income from self-supporting courses are more able to replace obsolete equipment in order to keep abreast of local and national technological developments.

21. These external sources of finance are of particular significance to engineering departments where equipment in many laboratories and workshops, although well looked after, is old and in many cases inappropriate to present-day needs. Often insufficient funds are provided by LEAs to enable colleges to up-date their equipment and machinery across the whole engineering spectrum. Some engineering departments have taken advantage of funding from external agencies such as ITBs or MSC to purchase numerically controlled machine tools and sophisticated equipment which enable teachers to demonstrate the use and application of micro-electronics and computers. Some colleges are now providing or attracting funds to enable business studies departments to purchase modern office equipment such as electronic typewriters or micro computers. Part-time release courses were adequately supplied with consumable materials.

Libraries

22. Although college libraries are not widely used by part-time students, who rarely have any free time during the day at college, most student induction programmes include an introduction to the college library which is usually well resourced and includes facilities for private study. In 20 per cent of the colleges surveyed the book stock was outdated and bore little relation to the courses on offer.

Communal facilities and social activities

23. In most of the colleges visited there was a shortage of communal provision for students. Common rooms tended to be monopolised by full-time students. However part-time students seldom participated in college social activities and most regarded the college solely as a place of study.

Organisation and management

24. Although there were considerable variations in the size and character of the 41 colleges visited similarities existed in their overall management structure and the organisation for part-time release courses. All the colleges had a governing body supported by advisory committees and a college academic board. Most colleges were organised on a departmental basis and usually operated a course and year tutor system.

25. Although responsibility for the day-to-day management of a college rests with the principal and overall responsibility for academic matters with the college academic board, the effective body in relation to part-time release courses and the students who attend them is the department. In most of the departments visited the head of department and his senior staff tended to concentrate primarily on administrative and organisational matters concerned with the deployment of resources, course validation, the purchase of equipment, industrial liaison, student records, staff coordination and the day-to-day operation of the system. Insufficient attention is given to personnel management and quality control. A key figure to the part-time student is the course tutor who is expected to coordinate the teaching, maintain contact with the firms who release students for the course, oversee curriculum development and monitor student progress. It is unfortunate that some colleges appoint course tutors without clearly defining their duties with the consequence that their role is too often confined to operational concerns rather than with creating staff teams that may develop good teaching materials and foster an environment in which learning is encouraged. When carefully prepared and planned

teaching was observed during the inspection it often derived from the talents of ingenious, dedicated and energetic members of staff whose work was rarely used as a basis for improving general teaching standards within the department and college.

26. Few of the courses inspected had any formal arrangements for the monitoring, review and revision of courses. Notable exceptions were found where regular meetings were held by the staff teaching on a course to discuss schemes of work, assessment and to review the course and its future development. Team meetings frequently seemed to be associated with courses which provided better than usual learning opportunities for students.

27. A particularly good example of leadership by a head of department was found in a northern college. In appointing team leaders the head of department looked for the following qualities:

- technical ability and a varied industrial background
- teaching ability, formal training and an interest in educational developments
- the ability to consider new approaches and generate ideas
- evidence that the move from industry to education was the result of a positive interest in teaching
- leadership qualities and the ability to generate enthusiasm and to get the best out of others.

In this department all new teaching schemes for a particular course are planned 12 months in advance and structured so as to encourage a professional approach in both staff and students. Teams of teachers are initially given specific briefs under the direction of the head of department; the teams may be self-selecting so that interested staff are encouraged to participate. Regular meetings are held, minutes are kept and teaching and learning materials are produced on time. Documents listing staff responsibilities are not prescribed but arise naturally from the course teams. Teaching programmes and materials are continually revised and updated. These highly structured learning programmes had the advantage that:

- teachers are freed to act as tutors and the responsibility for learning is placed more firmly upon the student
- less competent teachers benefit by working in a more structured environment

staff can be introduced into new ways of teaching such programmes do not rely wholly on the enthusiasm of a few able members of staff.

28. In this department there was frequent consultation between staff and policies were widely understood and enthusiastically implemented. The head of department had high expectations of both his staff and students and these were generally realised.

3 Examining bodies and the curriculum

Background

29. There are a number of major curricular traditions in non-advanced further education. One of these is concerned with training for industry and has its roots in the growth of scientific and technological education in the nineteenth century when organisations such as the CGLI and the RSA established their influence as examining bodies. In this tradition curriculum design can be traced back to analyses of jobs and standards of skills required in industry and commerce. Another tradition relates to the cognitive development of the individual and stems, to a large extent, from the sanctioning, by the 1944 Education Act, of general education in schools and further education. A third tradition is associated with adult liberal education which aims to promote personal development and foster the non-vocational interests of individuals. A fourth, much newer tradition, is concerned with the preparation of young people for employment by providing them with basic education, careers guidance, job skills and work experience. Part-time day release provision springs largely, but no longer exclusively, from the first tradition, which is based upon the belief that the curriculum should be relevant to the needs of employers.

30. Employers are reluctant to categorise trainees upon recruitment or to predict the level of work to which they may be suited. Nevertheless, many vocational courses for certain industries are matched to the needs and function of specific jobs, although further education has attempted to take account of the wide range of individual experience now found amongst part-time students. As a result, a wide range of specialist courses has been created which has produced both fragmentation and duplication of provision in some vocational areas. Furthermore, the varied approaches to curriculum design and implementation related to different examining bodies have placed a formidable administrative burden upon staff in colleges.

Examining and validating bodies

31. Although colleges make some use of a wide range of examining and validating bodies only those relevant to this inspection are discussed below.

THE CITY AND GUILDS OF LONDON INSTITUTE [CGLI]

32. CGLI was established over 100 years ago and occupies a central position in technical education as a curriculum development and examining body. The Council and the main committees of the Institute have representation from the education service, industry and commerce. In addition the Council is supported by a network of examination, subject and *ad hoc* development committees with a total membership approaching 8,000 of whom the majority are specialist teachers. Following the establishment of the Technician Education Council in 1973, the Institute relinquished its role as an examining body for technician level courses but still retains responsibility for examining nearly 100,000 candidates in a wide range of schemes and occupational groups at a variety of craft and operative levels. The CGLI works closely with the Regional Examining Bodies and a concordat between them is designed to produce a cooperative rather than competitive relationship.

33. Syllabuses for over 200 craft courses are devised by the CGLI and the REBs from three main components; craft theory; craft practice; and associated technical subjects. Some courses include industrial studies and general studies and/or communication studies. Each syllabus sets out course objectives which specify, in general terms, what the student should know, understand or be able to do at the end of the course. The statement of objectives and the description of course content are intended to provide college staff with a clear framework within which an appropriate course of study may be developed. In some colleges, responsibility for working out teaching schemes from this framework rests, not with individuals, but with a team of staff who derive considerable benefit from working together and exchanging ideas.

34. The CGLI requires students on craft courses to receive 240 hours of technical studies and between 60 and 90 hours of general

studies during an academic year, but it does not require general studies to be assessed nor does it prescribe objectives or content. Since 1977, however, the CGLI has offered a course (772) leading to the award of a certificate in communication skills which may be taken in place of, or as a complement to, general studies.

TEC AND BEC

35. The Technician Education Council (TEC) was established in 1973 and the Business Education Council (BEC) in 1974. On 1 October 1983, the two Councils were amalgamated to form the Business and Technician Education Council (BTEC). The following paragraphs refer, however, to TEC and BEC as they were at the time of the inspection when they were still functioning as separate bodies.

36. TEC is intended for those in, or about to enter, all levels of technician occupations. BEC is concerned with those whose occupations fall, or will fall, within the broad areas of business and public administration. Certain areas of vocational education, such as computer studies, are provided for jointly by both Councils. The stated role of both TEC and BEC is to plan, administer and to keep under review the development of a unified national system of educational provision and to devise or approve suitable courses, establish and assess standards of performance and award certificates.

37. TEC and BEC differ in their respective policies towards the implementation of the curriculum, and in their terminology. TEC courses are composed of units which are offered at different levels. Colleges may devise their own units which have to be validated by TEC, or use the standard units offered by the Council. Some colleges employ a combination of both standard and college or consortium devised units in their programmes. TEC offers courses at certificate and diploma and higher certificate and higher diploma levels. A certificate programme should comprise a minimum of 12 units (a maximum of five at Level 1 and a minimum of two at Level 3) and consist of approximately 900 hours of study in college for the average student. 15 per cent of a TEC programme at certificate level must be identified as general and communication studies either in separate units or through objectives across the whole course; no

standard units from TEC are available for general and communication studies.

38. BEC courses operate at three levels, General, National and Higher, and awards are made at either certificate or diploma level. Part-time students are expected to receive not fewer than 210 hours and not more than 270 hours of direct instruction and guidance per year. Courses are modular in structure and at all levels are made up of two distinct types of modules, core models and option modules. BEC emphasises that core and option modules should be closely integrated to ensure that the course presented to students is a coherent whole. For the General and National awards BEC has devised standard core modules and a range of option modules. Additionally, individual centres are allowed to devise option modules to meet particular local employment needs.

39. Module specifications are set out in terms of aims, general objectives and learning objectives. BEC is concerned with the ability to apply knowledge and skills in employment and to this end considerable emphasis is placed on practical assignments, both within and across modules (cross-modular assignments). Within a broad vocational education for business or public administration it is possible to make provision for the needs of particular groups such as bank employees, accounting technicians or local government employees. Student achievement is measured by in-course assessment and final examinations, subject to the agreement of a BEC appointed moderator. In the case of General awards there is an external end-of-course examination assessment for the core modules set and graded by BEC appointed examiners.

40. Both BEC and TEC expect colleges to consult with local employers over the planning and implementation of courses. Curriculum development groups have been formed within colleges and these are concerned with the writing and fulfilment of objectives for TEC courses and with the devising and implementation of assignments for BEC courses. In some instances, these groups have sought assistance from, and established useful links with, local industry and commerce in an attempt to ensure that the courses are relevant to the students' vocational needs and experience.

4 Teaching and learning

The college day

HOURS OF ATTENDANCE

41. Part-time day release students attend college each week during the college session. The organisation of their time in college varies considerably from course to course and from one establishment to another. In most colleges attendance is concentrated into a single day which may be as long as twelve hours or as short as six; in others students have a shorter day but return on another evening. Courses validated by CGLI entail between 300 and 330 hours study in college per year; an average of $8\frac{1}{2}$ hours study in college per week is required to complete a 36-week session. Students studying for TEC awards may attend college for between 6 and 12 hours per week depending on the programme of study.

42. Some employers prefer their employees to attend college on a block-release basis for continuous periods of education since they find this disrupts work schedules less than regular weekly release. Students on block release are commonly in college each day of the week for blocks varying between 4 and 12 weeks; the particular pattern of attendance is negotiated with the college. Such schemes are usually provided for employers who recruit large numbers of trainees. In certain cases it is not always possible for colleges to run the same course on both a day-release and block-release basis. In such circumstances students may have to conform to a pattern of attendance that may not suit their employers. The student on block-release attendance has a more sustained period in college (more akin to that of a full-time student), but the days tend to be shorter than those on part-time day release.

43. Some examples of the length and organisation of the college day for the part-time day release student are shown in Appendix 2. It is quite common for a subject to be timetabled for a period of $1\frac{1}{2}$ to 2 hours, with 4 or 5 subject periods making up the day. In many courses, these periods are spent wholly in classroom. However, the

allocation of long periods for practical activities is necessary and advantageous to the student.

44. The part-time day student receives a particularly concentrated form of teaching. It is not surprising that by early evening, students may have become tired, irritable and lacking in concentration particularly when the day has not provided a sufficient variety of teaching and learning patterns. Teachers are generally sympathetic to problems of tiredness and where possible evening classes are often devoted to subjects which make fewer academic demands.

ORGANISATION

45. A few examples will serve to illustrate a typical college day for a part-time day release student. For a craft engineering student from the electrical contracting industry the day may commence with 2 hours of electrical science theory, followed by a pre-lunch 1½ hours and a post-lunch 2 hours of electrical craft theory. There follows 2 hours of classroom based related studies. After a half-hour tea break the day is completed with 1½ hours of general and communication studies. Technician courses are no less arduous. An engineering technician studying mechanical engineering also faces an 11 hour day. In one college this comprised five 2-hour periods during which drawing and design, mathematics, manufacturing technology, general and communication studies and engineering science were studied. Other examples are shown in Appendix 2.

46. A group of engineering craft students began their day in college with a 3¾ hour period in the machine shop working on their project, the construction of a sine bar a precision instrument for measuring angles. During this time they were well motivated and were able to work with the minimum of supervision. The afternoon began with a 2¼ hour mathematics class when the teacher dealt with cartesian and polar coordinates. He presented the mathematics slowly and in a clear manner. Nevertheless there was an under-current of levity during this period and the teacher struggled to maintain interest and control. The concept of polar coordinates obviously stretched many of the students beyond their intellectual capacity. Two and a quarter hours of general studies followed but the regular teacher was absent. It emerged that there was no formal syllabus and the class spent the period writing up their project. The

final 2½ hour lesson in the evening with which the students 11 hour day ended was concerned with engineering principles and applications. This was an excellent class. The teacher used good visual aids, kept control of a difficult class and received a great deal of respect and response from the students. He gave an interesting talk on clamps and the forces and techniques involved in clamping and rounded off the evening with an appropriate video recording.

47. Two significant points arise from this illustration. Despite the problems of student fatigue towards the end of the day, the last period was interesting and rewarding because the teaching was stimulating and the session had been planned to include a variety of presentation. The project work at the beginning of the day appeared successful because the students were well motivated and working on their own with the minimum of supervision.

48. In general, patterns of organisation of the college day take little account of students needs, nor are they as administratively convenient as is often claimed.

Teaching and learning

CLASSWORK

49. The average class size encountered during the inspection was 15 but class sizes ranged from 6 to 50. Students are generally well disciplined and there were few instances of lack of control or unruly behaviour.

50. Generally the teaching was competent but uninspiring. Teaching styles tend to rely on chalk and talk, dictation, instruction and description. The pace is generally slow, students are rarely stretched and seldom involved in a classroom activity other than that of note taking and filing handouts provided by teachers. Although the chalk board continues to provide the main teaching aid teachers do use other methods. Overhead projectors are sometimes utilised effectively together with handouts which relieve the student of notetaking; as a consequence the pace of teaching may be accelerated and thus more time left for discussion and interesting

and useful digression. Where good teaching was observed a variety of aids was used. This was particularly true in engineering and applied science where teachers could readily utilise engineering components, for example, and conduct demonstrations in order to reinforce theory.

51. About 20 per cent of the colleges visited had established resource units to support both teachers and students by providing audio, visual, reprographic and photocopying facilities.

52. In the best practice observed the teacher knew each student in the class, used well-prepared visual aids and handouts, encouraged active participation through set work; and well chosen questions caused students to exercise thought and reason and stimulated student initiated discussion. A lesson on communications for first year students on a BEC National Certificate course is illustrative of the good teaching practice occasionally observed. The lesson was concerned with the modes and conventions of letter writing. The teacher adopted a sound approach to letter writing pointing out that in the preparation of a letter, the writer should be guided by the need to be clear and follow current practice. Using the OHP, the teacher discussed the layout of a typical business letter. She invited comment from the students and encouraged them to describe the letter writing conventions of their respective firms and companies. The interest of the students was fully engaged and they asked relevant questions. During the latter part of a 1½ hour lesson, the teacher distributed a selection of letters which the students examined critically. The presentation was relaxed, good natured, conducted at a suitable pace and made good use of visual aids. The teacher engaged the students interest and showed a willingness to listen to and learn from them.

53. With the exception of business studies, textbooks were not widely used in the part-time release courses inspected. Only occasionally were students recommended to purchase a book. The notes acquired from the teacher were the main learning material and for many students a large proportion of the day was spent in writing them.

54. Although as many as 4 or 5 teachers may teach a particular

part-time course only rarely do they meet as a team to discuss the course and even more rarely do two or more teachers share the same class in a team teaching role.

55. An interesting example of a team teaching approach was observed with students on an engineering basic craft studies course. The course was in a college located in an area with a large manufacturing industrial base. Each year the course enrolls about 300 students who are introduced to basic engineering manufacturing techniques. The students attend on a block-release scheme and spend one week in college each month. The procedure for three days of the week is to take a 'topic for the day' and a team of lecturers spend the major part of the morning presenting the topic. The lectures are well prepared with full use made of slides, overhead transparencies, magnetic board, chalk board and video-recorders where necessary. The teachers do not refer to notes but develop the topics step by step using the aids and demonstrations, alternately. After the lecture the students are given a file of prepared lecture material designed to reinforce their knowledge and understanding of the topic. The afternoon period is devoted to directed private study during which the teachers serve as tutors and the students have access to a consolidation unit containing five tape-slide systems with prepared learning programmes for each topic of the course. The tape-slide system is now being replaced by micro-computers and staff are currently developing the associated software. The course team are responsible for preparing and revising all the teaching material, for presenting it, for discussing it and tutoring the students in the group. The provision is a good example of well structured team work in which careful attention has been given to each aspect of the learning process. At the very beginning of a young person's spell at college, study skills, self-confidence in discussion and a mature attitude are being developed.

PRACTICAL AND EXPERIMENTAL WORK

56. There are a number of technical activities such as engineering, construction and industrial science in which experimental measurement, problem solving, investigation and evaluation are of special importance. In other areas such as food preparation, hairdressing and the engineering and construction crafts, the utilisation of tools and equipment are crucial to a full appreciation of

the subject. In business studies the important contribution which problem solving can make in helping the student obtain deeper understanding of the subject is increasingly recognised.

57. Although most teachers of science and technology acknowledge the importance of practical and experimental work this is all too often neglected because of pressure to complete the theoretical part of the syllabus. Normally it is not the practice of validating and awarding bodies to stipulate how a syllabus should be taught. Thus it falls to departmental heads and individual teachers to decide the proportion of time which should be devoted to practical work. The emphasis in many CGLI courses on 'studies' as distinct from 'practice' has often led teaching staff to spend too much time on classroom-based activity. The new TEC syllabuses have had similar consequences for technician students. By contrast BEC had stipulated the use of student assignments as part of the learning programme in business studies courses and has thereby ensured that a proportion of a students time is devoted to this type of activity. The examples given below illustrate aspects of good practice in the various fields inspected.

58. In food education, the emphasis in practical work is on the development of an understanding of the processes and techniques associated with cooking and on the evaluation and assessment of products. In one college the food preparation practical sessions were of a particularly high standard. Standards of dress and the professional behaviour of students were good. Work was conscientiously appraised by teachers and students were encouraged to make technical observation on the various products and to suggest reasons for any variation in the quality of their own and other students work. This provided valuable experience not only in practical aspects of cooking but also in the development of oral expression and the ability to receive and make constructive criticism.

59. Two examples illustrate good practice in engineering craft teaching. In one college three lecturers concerned with a course in mechanical engineering maintenance worked as a team to develop the course. During the first year, the laboratory programme is confined to exercises in instrumentation and experiments involving

the use of simple machines and materials. These exercises were designed to develop the students knowledge of engineering principles as well as helping them acquire manual skills. In the second year the emphasis is placed on the setting up, examination and assessment of plant systems including pneumatic and hydraulic circuits, steam, water and refrigeration systems and plant components. Students are required to submit 15 reports and to answer a series of searching written questions.

60. In another college there was an original approach to the teaching of manufacturing techniques. Specialist workshop areas had been developed to cater for different learning activities with one area dedicated to machine-tool-setting techniques for first year mechanical engineering craft students. An important characteristic of this provision are the 36 machine-setting assignments which students have to undertake. These require one or two verification cuts and a single machine cut provides the effective 'acid test' for each exercise. There are 20 work stations, each of which comprises a machine together with all ancillary jigs, fixtures and tooling. A central shadow-board contains a full range of measuring instruments. There is an instruction folder for each assignment which gives details of procedure, provides background information and theory together with helpful notes and photographs. The student has to respond to questions provided on complementary sheets and assessments are carried out at various stages with three or sometimes four assessments per assignment. The whole programme is highly structured with carefully thought out assignment and assessment procedures. The tasks are clearly prescribed and although there is freedom for the student to exercise his own judgement, the time factors are rather tight, and, in order to gain the highest mark, speed is of prime importance. Four grades of attainment are possible for each exercise. The assignments not only develop manual skills but also make the students think about how and why certain techniques are to be employed; each exercise seeks responses which give evidence of understanding and of mastery of the problem.

61. The same department also employs similar techniques in its approach to experimental work. In the same course students complete 40 short laboratory investigations which supplement and

reinforce learning of elementary principles of engineering science and mathematics. The exercises have been designed to give the student the opportunity of relating principles to practice through the solving of engineering problems. Each has been planned to show how a particular concept in science or mathematics could be put into practice. The variety of laboratory equipment used in student exercises demonstrated how much thought and effort had been spent on devising investigations which would illuminate theoretical studies.

62. In some engineering craft courses teachers probably devote too much attention to monitoring manual skills and too little to developing good practice such as that described above.

63. General and communication studies forms an integral part of all part-time day provision but is often not readily accepted by students because it is not seen by them to be relevant to their work. Staff teaching in this field therefore need to be able to motivate students particularly well and assignment-based learning and work of a practical, investigatory nature is often used successfully. There are a number of colleges which have established banks of teaching and learning material. In some colleges general and communication studies staff have worked closely with those teaching in the vocational fields to encourage both group work and the development of independent habits of study. In one particular institution, the approach to the teaching of general and communication studies is almost wholly based upon study packs. These 'packs' or assignments, require the student to exercise responsibility for the management and organisation of their work and to exercise a range of communication skills.

64. Assignment-based learning has always been incorporated in BEC courses and is now becoming more prominent in TEC provision and in certain CGLI craft courses. The unit structure of TEC tends to promote a learning programme consisting of subjects taught in isolation. Good, unit-based assignments can be developed by an individual member of staff but assignments which attempt to integrate material in a programme require subject teachers to work as a team. At one college an interesting and original initiative is being developed for motor vehicle technician students. The theme

of the assignment is the internal combustion engine poppet-valve and guide assembly. Students have to complete dimensions and tolerances on a partially completed design of a valve assembly and have to answer questions related to tolerances and limits. They then have to complete a number of experimental tests on valve springs to determine spring stiffnesses and hence valve operating forces. Stress calculations are then carried out. Students have to consult technical publications to obtain information on valve-port timing and have to construct a valve-port diagram for the assembly. To complete the work, questions have to be answered on costing and on machining and manufacturing procedures which include certain critical geometrical calculations. The students have a one hour tutorial period during the day in which they can pursue this work.

65. In all the above cases careful staff preparation has been necessary and in those colleges where staff work together as a team, the benefits are likely to be greater and more persistent. However, there are many colleges where the emphasis placed on practical and experimental work is insufficient and little effort is made to integrate theoretical and practical studies.

PROJECT WORK

66. The project as a mode of study for students in further education is defined and interpreted quite widely. Some colleges and departments use the term to describe any form of student-based learning activity so that assignments, relatively short investigations and even practical exercises are regarded as project work. For the purposes of this report, the project is considered to be an extended piece of work lasting a number of weeks. Some teachers argue that because of the nature of college attendance, projects for part-time day students are not easily managed. Conversely, since individual effort outside college is essential to project work, it can also be argued that this mode of learning is most suitable for part-time students. Good examples of part-time day students project work tend to support the latter view.

67. Projects usually form a major contribution to a course of study and tend to be pursued at a later stage when the student has established a base of knowledge and understanding and is more mature and capable of independent effort. A project can take many

forms: it can be an extended investigation, a new design concept, a survey, a piece of research, the solution of a problem or the development of a new technique. Projects are usually undertaken individually but examples of group projects were encountered where a small number of students worked together as a team.

68. Projects are normally structured to last between one term and one academic year. A group of students, usually the whole group within the class, is normally supervised by a single member of staff and occasionally by two staff from different disciplines. In a well structured programme time will be allowed each week for consultation; regular logbooks are kept and a final report is normally required. In certain instances students make a formal presentation of their work which contributes to the overall assessment. A project may arise from suggestions by staff and in certain departments, students are encouraged to identify a suitable topic for investigation taken from their place of work. Industrially based projects if well defined and organised can be particularly rewarding for both staff and students.

69. An interesting example of project work was found in a TEC certificate course in electrical engineering. The project ran for 36 weeks and for 80 minutes per week. The project was supervised by two engineering and one general studies teacher who served as consultants to the students. The students worked on their own or in groups of two or three and chose a topic from a list of ten projects. Each had a 'design and make' content and students were required to plan, design, make, test, record and present their work both in the form of a written report and orally. Students found the work taxing but stimulating. It engaged them in planning their work, marshalling facts and classifying and filtering information and it developed in them a spirit of enquiry which motivated them to learn. The project also developed their self-confidence as they mastered the fundamental principles of their subject; they used their acquired knowledge to develop an acceptable solution which they were then able to communicate in both written and oral form.

TUTORIALS AND PRIVATE STUDY

70. Most part-time day release courses are assigned a course tutor who usually assumes either a pastoral or administrative role. Only

rarely is there any formal arrangement for academic tutoring. In science and technology courses some tutoring is done in problem solving sessions when the teacher gives help to individual students. Such sessions are sometimes specifically timetabled but more take place within a lecture period. Project and assignment work also provide an opportunity for individual and small group tutorial work. However, the extent to which this form of teaching occurs depends largely on the initiative of individual teachers.

71. Homework is set regularly in vocational areas where mathematics, communication, business studies and the application of scientific principles are major components of a part-time release course. It often involves some form of problem solving and it is marked conscientiously by teachers. The well motivated part-time release students respond to the challenge of regular homework return it on time and most recognise its value. There is less homework set in those areas concerned with craft studies although these students are often expected to complete exercises started at college in their own time and also write up their practical work. Projects and assignments require a great deal more private study but such tasks are generally given only to more mature students in the latter years of their course.

72. Continuous assessment is becoming an increasingly common feature of part-time release provision and requires students to revise their work continually throughout their course. The need to do this has resulted in a decrease in the amount of directed private study and in set homework. In revising, students rely almost entirely on the notes obtained in class and rarely use the library or consult text books. Some effort is made by teachers of general and communication studies to encourage students to use the library and other college resources as a help to private study, but such initiatives are seldom paralleled in their vocational studies.

Syllabus content

73. The course syllabuses and their interpretation by teachers play key roles in determining the teaching and learning styles employed

in colleges. However, too rigid an adherence to specific learning objectives can inhibit teaching style and method. In most part-time release courses syllabuses are overloaded and teachers feel under pressure to complete them. Too often the broad general aims of a course are lost, teachers abandon lesson plans and schemes of work and teach only to the specified objectives. The result is that a teaching style predominates which has as its main objective the transmission of information from teacher to student. This was particularly noticeable in courses validated by the TEC.

74. Teachers expressed their concern about the heavy administrative burden associated with elaborate validation and assessment procedures. The complaints are particularly directed against TEC courses, where the time spent by teaching staff on administrative matters is too great and affects both their morale and their capacity to devote time to preparation for teaching.

Assessment

75. Until recently the main basis of assessment for part-time release students was a formal written examination taken at the end of the course. This method of examining is still highly regarded by some teachers and many employers and continues to be widely used by professional bodies. However, the major further education examining and validating bodies now increasingly use various forms of continuous assessment in allocating grades to students. To meet a variety of needs and give expression to different course traditions they have adopted distinctive procedures for assessment.

PROCEDURES

76. CGLI publish a detailed and helpful set of instructions on assessment for the guidance of teachers. Various procedures have been adopted to measure student performance. In agriculture and horticulture, for example, in-course assessments are based on tests of recognition and practical skills, whilst in hairdressing the assessment is based on the overall impression gained by the teacher of the student's hairdressing skill over a period of time. A number of teachers, however, applied the CGLI scheme too rigidly. In consequence they gave students only their final grading and did not

discuss individual strengths and weaknesses. Furthermore, some gave too many assessments and their implementation became burdensome.

77. The Business Education Council lays down procedures with which colleges offering its courses must conform. At National level colleges set their own examinations to be taken on the completion of modules, but at General level the core modules are externally examined. Continuous assessment is also employed so that performance in assignments contributes to the assessment process. These procedures are monitored by BEC moderators. Such assessment methods have influenced the teaching strategies employed by teachers and this is particularly marked in the core modules. Thus student participation and active involvement in learning have been encouraged and the acquisition of study skills fostered. Stress has been laid on the need for improved integration of the constituent elements of courses. In some courses however the criteria for assessment were found to be imperfectly understood by certain teachers. In particular, assignments were sometimes used as assessment rather than learning devices. There was evidence of disparity of standards required by certain colleges as compared with others. Greater standardisation would be advantageous especially where employers laid down minimum standards for progression from the first to the second year in the National Certificate courses. Some difficulties arose from the differences between BEC's assessment methods and those still retained by certain professional bodies.

78. In TEC courses, each subject unit within a programme of study is accompanied by an approved assessment plan. There are a number of different assessment models accepted by TEC. These include tests taken periodically throughout the course unit, tests taken on completion of a course unit and assessments based on in-course assignments and practical work. Generally a combination of these assessments is used in arriving at the final fail, pass, merit or distinction grading. Students on TEC courses took their assessments seriously and often pursued private study outside the college in order to prepare for them. One effect of this form of regular assessment was that students sustained their effort throughout the year. Many students complained about a

concentration of tests and assignments on the timetable so that there were times when they faced several tests in one day. The weaker students were also put under pressure when repeating tests on units they had failed whilst at the same time they had to cope with new units. However, too many classroom assessment tests measure short term memory retention and require only brief answers which do not explore understanding or require students to formulate answers and solve problems with appropriate and descriptive language.

79. In addition to fulfilling examining body requirements some teachers found assessment procedures useful for identifying remedial tuition needs and helpful in the evaluation of the effectiveness of their teaching. Good procedures were encountered where teachers carefully observed each student at work, noted strengths and weaknesses and discussed these with them individually at the end of the exercise. In discussion the teacher reinforced the main points to emerge during the exercise and students were encouraged to comment freely about the difficulties they had experienced, the satisfactory features of their work and its weaknesses. Students appreciated the opportunity to appraise their progress in this way.

80. Teachers make considerable efforts to ensure that assessment procedures laid down by examining and validating bodies are rigorously adhered to. Many departments have well-organised internal procedures for checking, moderating, recording and collating student performance. The time and effort expended in these activities may be at the expense of time available for classroom preparation.

METHODS

81. The majority of teachers regard assessment as an integral part of teaching and learning and choose a form of assessment which complemented their style and method of teaching. As noted in the previous section, the type, frequency and levels of assessment are often prescribed by the examining and validating bodies, but all leave the teachers some scope to use their initiative in devising appropriate methods of assessment. Schemes used to assess the work of part-time release students generally contain some but not

all of the following elements: written and practical examinations, short tests, classwork, homework, practical course work, projects and assignments. A typical end of course assessment for craft students in construction consists of a 2 hour multiple choice examination paper to test the achievement of set objectives; this is complemented by in-course assessments of written assignments; and the achievement of objectives related to practical activities.

82. Although the involvement of industrial representatives in the assessment of part-time students is rare it did occur in some agricultural and horticultural courses. The system appeared to work well and merits wider application. While the standards of achievement attained by the students were largely satisfactory some construction employers questioned the validity of 'open book' examinations associated with CGLI assignments in which students were allowed to refer to books and other reference materials.

83. Course tutors and other staff diligently monitored the assessment process which in most instances was well organised. The administrative burden for course and year tutors generated by assessment was considerable and extremely time-consuming. At the end of the session, recording and collating the results of all assessments in all units became a full-time occupation in preparation for the visit of an external moderator.

STANDARDS AND LEVELS OF ACHIEVEMENT

84. Most day release courses lead to nationally recognised qualifications, awarded on the basis of external examinations such as those of CGLI or internally set and externally moderated assessments such as those of TEC and BEC. While the concept of a standard is open to a number of interpretations, it is generally seen in terms of a student's minimum achievement for an award. For TEC and BEC courses standards are clearly implied through the stated learning objectives achieved.

85. Many students and teachers said that it is easier to complete a course successfully where assessment is continuous and units leading to the award of a certificate can be accumulated over a period of time. Occasionally, anxiety was expressed by both staff and students about the credibility of the award and its standing with

outside bodies and employers. Employers' views on engineering TEC courses varied; a few said that no beneficial changes had taken place with the introduction of TEC courses and some said they were too academic and insufficiently integrated with engineering practice. Conversely there were companies which welcomed the TEC structure and many courses attracted favourable comment with employers being generally complimentary about college examination results. Some employers were suspicious of the high pass rates in the construction craft examinations and tended to make inappropriate comparisons with provision which TEC courses have superseded. The slow pace of the work in hairdressing was criticised by both employers and students, and a need was seen for the development of assessment methods which measured commercially acceptable performance standards and speeds.

Personal and social developments

86. The tightly structured day which students spend at college has both value and limitations. Students recognise that they will enhance their career prospects through studies which are pertinent to their work. Attendance at college also provides the opportunity to meet other students from a variety of backgrounds with different experiences. However, it is not uncommon for a student to arrive at college, go straight to his class, spend his break periods with other members of his class and leave college at the end of the day without having exchanged a word with either fellow students from other departments or with any of his teachers.

87. The personal and social development of the student is often implicit in the objectives for general and communication studies. Although some students question the value and relevance of their course, more recognise that the general and communication studies teacher may possess a broad base of knowledge and expertise which may be of help to them in their personal lives. On the other hand, part-time release students also establish firm and close relationships with their vocational teachers and their departments and these may well continue long after the course has been completed. Although personal and social development may be furthered through the

whole curriculum, general and communication studies has, by its very nature and scope, considerable potential as a forum for personal counselling. In one college, for instance, second year craft students followed a module called 'The Law' and this usually resulted in students' seeking individual advice from the general studies teacher on legal problems such as motoring offences or, in the present economic climate, clarification of their rights and obligations should they be made redundant. In another college a general studies teacher with a degree in Law had set up an informal clinic where part-time students could consult him on legal matters and in particular obtain clarification of their legal rights and duties as apprentices. In at least five colleges, there was evidence of part-time students consulting their general studies teachers with personal problems concerning money and finance; third year craft students sought help on house purchases, banking and insurance and did so as a consequence of covering these topics in general and communication studies lessons. In some colleges, students who found reading and writing difficult were provided with a valuable opportunity, through general and communication studies, of improving their basic skills in a special class.

Staff expectations of students

88. Where teachers act as tutors to small groups of students, or supervise assignments or help students in the workshop/laboratory their expectations of students are high. In all these cases the student-teacher relationship is constructive and has purpose. Students are encouraged to develop their skills and intellect and the standards of work achieved reflect individual abilities. In class, teachers often have a lower expectation of their students. Students generally play a passive role and attempts to match the teaching to group ability are poor and only rarely are teaching methods and styles changed to take account of student needs. The more able students are rarely stretched and teachers are not always aware of the wide ability range within a particular class.

5 Progression and withdrawal

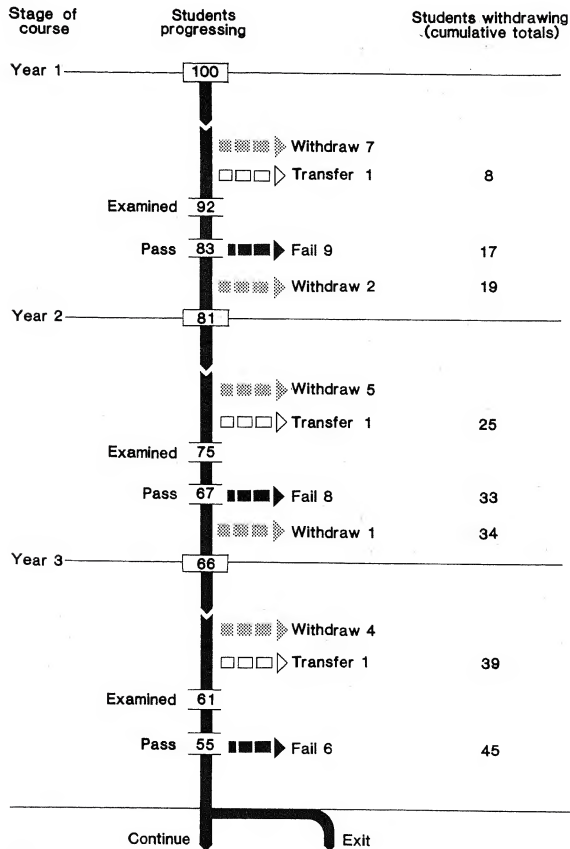
89. At the completion of a course, and occasionally during it, a student may proceed to further study at a higher level. This practice is termed progression. The term withdrawal describes the students leaving of a course before its completion. Four main factors influence progression and withdrawal:

- policies of employers
- students' individual circumstances
- aspects of course provision in college
- assessed achievement.

An employer may cause a student to withdraw from a course by making him or her redundant. On the other hand the employer may only grant release to enable a student to progress from one year to the next on condition that the employee obtains examination results considerably above the pass level. Withdrawal may be caused by circumstances such as domestic problems, change of employment, change of work place, incompatibility of the course and the students' needs, and the inability of students to meet the costs of increased tuition fees when these are not reimbursed by the employer. Part-time release students are often insufficiently informed about the programme of study and assessment which lies ahead and early withdrawal is often associated with a failure to recognise and cope with these demands. Part-time release courses are generally structured to encompass skills and knowledge appropriate to a particular role in industry. Technological change and diversification, however, have created jobs which are not matched by many of the existing courses available. This problem is exacerbated when college staff who have insufficient knowledge of the industries from which students are released enrol them on courses that are not appropriate to their needs. The result is student disaffection with the course and in some cases they withdraw. Few colleges keep records of the reasons associated with student withdrawal from courses.

90. On some courses the pace of academic work is too demanding for some students. For some attendance at college is required by apprenticeship agreements. In recent times apprenticeships have

Figure 4. Student progression and withdrawal in engineering craft courses (based on 700 students from 11 colleges, normalised to an initial intake of 100)



been progressively shortened and studies which at one time occupied five years are now compressed into three. In construction, for example, many part-time craft courses endeavour to cover both craft and advanced craft studies in three years of part-time study.

91. Some industries have special characteristics which influence a student's progress. The hotel and catering industry, for example, has considerable staff turnover which is reflected in a high withdrawal level (50 per cent) from courses. In the construction industry, mobility is often required of employees and many students find themselves working many miles from the college where they originally enrolled.

92. Considerable variations were found in the progression of students attending the courses inspected. A typical case is illustrated by means of a flow chart in Figure 4. This particular example illustrates progression in engineering craft courses and is based upon data relating to the performance of 700 students from 11 colleges following courses in seven engineering craft fields. The information is normalised to an intake at year 1 of 100 students. During the first year seven students withdrew and one transferred to another course. 83 students passed the examination but only 81 proceeded to year 2. Over the three years normally required to reach a City and Guilds Part 2 level of attainment 55 students

Table 4 *Output/input ratios for a range of courses.*

Course	<u>Output Input</u>
Engineering TEC	0.49
Construction TEC	0.82
Science TEC	0.30
Business BEC (Nat)	0.58
Engineering craft	0.55
Construction craft	0.36
Business BEC (Gen)	0.67
Catering 706/1/1-2	0.32
Catering 706/2/1-2	0.54
Hairdressing 760	0.55

succeeded and 23 actually failed examinations. A broad measure of the efficiency of the system is, therefore, provided by the output/input ratio which in this example is 0.55. This technique has been applied to a broad range of craft and technician courses which were inspected. Output/input ratios for these are shown in Table 4. These ratios cannot be interpreted as an exact measure of the success of the part-time release system because many of the students who withdraw and transfer may continue studies elsewhere and it is difficult to monitor this movement within the system as a whole.

93. The number of withdrawals, even when students have satisfied course requirements gives cause for concern. Few colleges analyse the reasons for these losses and in consequence most are unable to take appropriate action.

6 Colleges and employers

94. The kinds of part-time release courses on offer in particular areas and the numbers and abilities of students recruited to them are shaped by the nature of local industry and commerce and by the attitudes of employers to further education. The local provision is set in a national pattern determined by professional bodies and major employers. Colleges therefore make considerable efforts to establish and maintain contact with the employers of students who attend part-time release courses. These arrangements take a number of forms.

Links with industry

95. Local industry is usually represented on college boards of governors and the advisory committees of college departments. The effectiveness of departmental advisory committees is variable. There is a tendency for such bodies to meet too infrequently to be influential. Advisory bodies are inclined to follow rather than lead college thinking. They are often more effective when they are concerned with specific rather than general aspects of a department's work: representatives from industry are generally more willing to give time, commitment and knowledge to a specialised advisory committee on, for instance, road transport, or plumbing, than a more general body concerned with the work of the whole department.

96. In most departments, heads of department, course organisers and individual members of staff – some of whom have a designated responsibility for industrial liaison – have established valuable links with local industry in which a substantial number have worked themselves. Although some staff maintain contact with industry only by telephone or letter, other teachers do make regular visits to local firms in order to acquaint themselves with the changing demands of employment such as those caused by developments in technology. The most effective links with industry are often those which have developed incidentally through administrative tasks

such as the issuing of reports on student attendance and timekeeping and the estimation of likely demand for future courses. Employers value frequent and reliable information about students especially concerning absence or poor timekeeping. Some employers felt, however, that colleges might be more regular and thorough in their reporting of poor attendance records and a number, particularly in engineering, asked for more comprehensive information on students, with comment on such qualities as application and adaptability.

97. Liaison between colleges and employers has, traditionally, been strong in the farming industry where farmers make their own farms available as a resource for learning. Some engineering employers, particularly in the fields of fabrication, welding and motor vehicle maintenance provide colleges with materials and equipment at no cost.

98. Hairdressing employers give encouragement and material support to competitions organised in the colleges and through these activities learn of the standards that their students may achieve. Some colleges serve as venues for commercial demonstrations in which local employers sometimes participate. These competitions and demonstrations have helped staff to keep abreast of modern commercial methods and practice. It is to be regretted that financial restraints within both colleges and commerce have led to these being less frequent than they used to be.

99. By contrast, although links on administrative matters between construction departments and industry are satisfactory, there are comparatively few examples of useful collaboration between construction teachers and employers aimed at using the construction industry itself as a learning resource. This is partly because many small employers send only one student to college; for instance in the catchment area of one college there were 165 firms. In engineering, there are few instances of employers or practising engineers teaching on part-time courses or any other direct participation by industry in the college-based work. This is true also of most sectors other than banking and medical laboratory sciences.

100. HMI found that links with industry were good in 45 per cent

of colleges', adequate in a further 32 per cent and poor in the remainder. There were marked variations between sectors; links were best in industrial science, weakest in some aspects of business studies and food education. In some sectors, employer forecasting of recruitment was poor making it difficult for colleges to predict likely course enrolment and plan the effective deployment of staff.

101. Even where administrative processes were effective and more formal mechanisms such as advisory committees were well established, there was little evidence that employers had much impact on the curriculum. Exceptions to this were found in engineering, banking and industrial science, where specific elements of courses were developed to meet local needs.

102. Elsewhere few employers appeared to have much influence on what was being taught. The process of industrial consultation which, for example, TEC required of colleges as a prerequisite for course approval seems to have had little influence upon the nature and scope of programmes; the main industrial consultation centred round the appropriateness of unit titles and packages and was not concerned with content, methods or standards.

Recruitment to jobs

103. During the period of inspection, the recruitment of employees within almost all sectors of industry and commerce decreased and opportunity to enter employment was restricted. This has had marked consequences for recruitment and the selection and release of students to part-time courses since employers almost always carry out their own selection of recruits and thus implicitly determine levels of entry to college courses. There are immense local and regional variations in the employment markets and the minimum entry standards demanded by employers vary considerably area by area. However, throughout the period of the inspection it was generally the case that employers were recruiting fewer employees and had raised their entry standards.

104. In industrial science, for instance, many employers now recruit employees at 18-plus rather than 16-plus because the former

are viewed as more mature, have better educational qualifications and are allowed, because of their age, to undertake shift work and hold licences to work with animals. In some areas of the industry there is a growing tendency for employers to appoint graduates to positions formerly held by those with technician qualifications. The combined effects of these recruitment trends on support for day-release courses have been considerable and the following statistics which relate to one college may serve as a reasonably typical example. At this particular college the technician certificate course in medical laboratory science used to recruit about 200 students a year at 16-plus; it now recruits about 80, representing a drop in enrolment of 60 per cent. The higher technician course used to recruit 200 students at 18-plus; it now recruits about 125 students a year, representing a drop in enrolment of 38 per cent. At the same time, enrolments for the Fellowship of the Institute of Medical Laboratory Sciences post-higher certificate course have increased considerably and about 50 per cent of its students are graduates. In some colleges courses for the 16-plus part-time student have had to close. In others, such courses have been joined by an increasing number of young students from MSC-financed work experience schemes, a trend which is notably apparent in agriculture and the distributive trades. By the end of this inspection exercise the Youth Opportunities Programme was having a major impact on job and training opportunities for new entrants to many industries.

105. In the business studies field, similarly, recruitment has been cut in some cases because of reduced staffing needs in industry and a general reduction in labour turnover. In consequence, employers have been more selective in their recruitment and many require candidates for clerical appointments to have a minimum of four GCE O-levels. As a result, demand for BEC General courses (for which no O-levels are required) on a part-time basis is declining and, in some areas, disappearing altogether. BEC National courses, except those in distribution, are mainly followed by male students. Of those female students who enrol, many have limited aspirations: some said that they were unwilling to accept job mobility as a condition of advancement. In the main, secretarial employers continue to appoint recruits who already have marketable skills in office skills and seldom give them release to part-time courses in order that they might improve on these. Employers in industrial

sciences and most areas of business studies set store by formal education attainment.

106. In general, construction firms have no need to advertise job vacancies. Employers who are recruiting entrants for the Construction Industry Training Board (CITB) integrated scheme select applicants on the results of the CITB testing procedures. Those seeking craft apprenticeships are usually interviewed and employers say they expect successful applicants to demonstrate enthusiasm and an interest in the industry; some employers also give applicants spatial ability and numeracy tests. Whatever selection method is used, however, it is often supported by local knowledge of the young person.

107. In the hotel and catering industry some employers choose to recruit qualified youngsters who have completed a full-time course of study in hotel and catering. Three employers had taken this decision because of the cost of training and the high wages paid to young people. Of the remaining employers an equal number had no policy at all or recruited both school leavers and students who have completed full-time course of study.

108. In engineering the recruitment trends over the past two years are shown clearly in Table 5. Information is drawn from 86 companies and training associations. Reductions in recruitment have been more significant in craft than in technician apprenticeships. The number of applications for apprenticeships in the engineering industries is increasing while opportunities are declining. The average number of applications for each vacancy in craft or technician training was approximately 33 but varied from as few as 5 to over 100. It is also evident that an increasing number of young people are being recruited from full-time courses including those associated with the Youth Opportunities Programme.

109. With few exceptions employers and group training associations in engineering carry out interviews and in their selection criteria they attach importance to attitudes to work, willingness to learn, and the ability to communicate orally and in writing. Selection often takes place in the early part of the year when full school reports and examination records are not available

Table 5 *Engineering apprenticeship recruitment 1980-82 — based on information obtained from 86 companies*

Engineering apprenticeship recruitment	Percentage of companies	Typical activity
Increased	5	Electronic and electrical engineering
Unchanged	24	Mainly high technology
Fallen by up to 30%	9	Some group training associations in the midlands and south; fabrication
Fallen by 30 to 70%	21	Mainly general and mechanical engineering;
Fallen by 70% or more	13	Transport and shipping in the north; Northern Group Training Association
Suspended	28	Varied but including traditional general engineering, contracting, and motor vehicle servicing.

and partly as a consequence of this many engineering employers carry out their own testing. School reports and the quality of the written applications are the main determinants in the selection of young people for interview.

110. Selection for employment does not appear to be rigidly dependent upon the possession of external examination grades and it is not uncommon to find considerable variation in entry standards but young people recruited into engineering and manufacturing now have higher academic attainments than in recent years. A technician trainee is now expected to have good grades in three or

four GCE O-levels which must include mathematics, English and a physical science and craft trainees are expected to possess grade 2 or 3 CSE in a similar range of subjects.

Recruitment to and placement on courses

111. In practice, colleges enrol those students sent to them for part-time release courses by their employers and it is unusual for them to operate any student selection process other than ensuring that students hold the necessary qualifications for those courses which have entrance prerequisites, such as BEC National. Where no criteria are specified some departments lay down their own.

112. The enrolment process itself was efficiently handled but was more concerned with administration than academic counselling; the exigencies of form-filling and the regulating of an increasingly elaborate fee structure tended to dominate procedures. There was some evidence of staff providing careful course guidance for students at enrolment but much of the enrolment procedure seen was characterised by speed which led to perfunctoriness, uncertainty on the part of students about the course for which they had enrolled and a conspicuously authoritative tone adopted by some staff in allocating students to courses.

113. In most sectors, notably food education and agriculture there is little choice as to which course a student should follow. In other fields, particularly engineering, there is an extensive range of possible courses. In such cases, the placement of a young person on the most appropriate course depends upon the employer having a thorough knowledge of course provision and both employer and college clearly identifying the particular job for which the young person is to be trained. College staff have, however, to deal with large numbers of potential students at any one session and also have to work against time.

114. This inspection has revealed, however, that there are some cases of mismatch between the training the apprentice obtained at

work and the further education received in college. This mismatch is most marked when:

a more appropriate course is not available; this is often the case in small colleges, in rural colleges and in establishments where there has been a serious decline in part-time enrolment and a consequent reduction in the range of courses on offer; students have not been given credit for previous achievements; students have been placed in courses more on the basis of their school attainments than their training needs; trainees change their training programme or job without a corresponding change of their further education course.

115. In some fields of engineering eg telecommunications, motor vehicle, electrical installation, placement on courses is determined by national agreements between employers and training boards. Certain employers do not make any distinction at the recruitment stage between craft and technician trainees while others insist that craft apprentices attend relevant CGLI craft studies courses even though the level of achievement of young people at school may indicate a capacity to cope with a relevant TEC course. Furthermore, certain high-technology industries are so concerned about opportunities for career progression that craft apprentices are permitted to follow TEC courses.

116. Employers who have not specified the particular courses which they wish their employees to follow seldom argue with the decisions made for them by the college. The young employees rarely feel that they have any personal involvement in the choice of a course. The guidance about courses given to students at enrolment is minimal and many remain ignorant about options or progression within their courses; they are particularly uninformed about the unit credit system within TEC courses.

117. Having taken such a crucial role in selecting courses for their employees, it is a matter of regret that many employers do not follow this up by displaying a positive interest in their employees' progress at college. Employers could provide assistance with the setting up and implementation of projects; their up-to-date knowledge of industry could be of great assistance to teaching staff and they could also help with assessment.

Transition from school to work and college

118. The quality and strength of the relationship between further education and schools and between industry and schools varies. In agriculture, for example, there is good liaison between colleges and the careers service which is part of a strong network involving links with secondary schools. Staff from the colleges visited schools to provide information and advice to prospective agriculture or horticulture students, and, in some cases they teach on Certificate of Secondary Education (CSE) courses.

119. Linked courses between schools and further education in particular occupations provide school pupils with a useful opportunity to gain some knowledge of possible careers. When there is some element of pupil selection and where relationships between school and college are close they are often of high quality.

120. Few employers have direct contact with local schools although some of the larger firms are involved in careers talks. Most employers claimed that as they had no difficulty in recruiting employees and thus saw little need to maintain close contact with local schools. Several employers, eg in the construction industry, said that neither the schools nor the careers service fully understood the needs of their industry; there were certain qualities and attributes required of a young worker in the industry which were not necessarily measured at school and school records were not always a reliable indicator of pupil's suitability and potential. Although some industries were involved in programmes of visits to schools and careers conventions, employers believed that their guidance and advice would be more useful to school pupils if they could talk to them before they had chosen their GCE O-level or CSE subjects.

121. Very few students appeared to have received information or guidance from their schools about part-time release courses. Most claimed that it was not until they entered employment that they realised they might follow a vocational part-time release course.

122. There were few systematic arrangements to help students

make the transition from school to working life and college. Although colleges usually provided structured induction programmes for full-time students, there was little evidence of similar initiatives for part-time students. Guidance and counselling services in colleges are used almost exclusively by full-time students. Part-time students appear to develop a measure of self-sufficiency, possibly by being at work, which enables them to cope with the transfer. Only the larger firms provided new employees with an induction programme on working life; within some colleges general and communication studies can be instrumental in helping the younger student make the transition from school to the world of work. Syllabuses and schemes of work indicated that topics such as the structure of industry, taxation and wages, and personal finance were offered to students in their first year and one college had designed a first year general studies module for craft students entitled, 'Adjusting to work and college'.

Employer policies on day release

123. Employers show their support for day release education in a variety of ways. Some do no more than offer paid release for the day. In hairdressing only one third of entrants to the trade receive further education through part-time release. Of these, about one half are granted a full day's release to college in addition to their weekly day off and about one-fifth are given half a day's release; the remainder attend college in their own time. Over 80 per cent pay their own course and examination fees and nearly all pay their own travel costs to and from college. Many individual hairdressing employers give very limited support to the concept of part-time release and virtually no financial assistance to their trainees who attend college.

124. Other employers, in different sectors, are more generous and provide financial assistance for travelling, examination fees, books and equipment. Some employers seek ways of ensuring that the employees so released take their studies seriously. In the business studies field, for example, one employer provided an interest-free

loan to the employee to cover the charges which he would have to meet. This advance had to be repaid over a period of time from salary, but, if the student was successful, the total amount was reimbursed. Banks adopted a policy of providing a cash grant when the student succeeded in passing the National Certificate assessment, though this amount in practice only approximated to the fee expenditure incurred.

125. In certain sectors employers are becoming more restrictive over granting part-time release to further education. When job opportunities are comparatively scarce there is little need for employers to offer part-time release as an incentive to recruitment. In banking, for instance, it is becoming the practice not to grant part-time release during the first year in which an employee is recruited in order that he or she may adjust to and show aptitude for, the discipline of working life. At least one bank has decided that students who have completed the first year of a BEC National course will only be permitted to progress to the second year if they have attained what amounts to a credit level in their first year assessments.

126. Despite the fact that training at work and further education at college are intended to fulfil complementary roles, there is a marked lack of understanding about the content of these two components across all sectors of day-release education. Few employers fully understood the nature and scope of the course studied by their employees at college and the training at work is so varied that few college staff attempt to find out precisely what their students are doing when they are not at college.

7 Perceptions and issues

127. Many themes have been touched on in the course of this report: the role of validating bodies and their influence on the curriculum, the ways in which colleges are organised and resources allocated and the limited involvement of employers in helping to shape course content.

128. The dominant, and most important theme concerns the nature of the learning experience for the individual student. Students on release submit to long and continuous periods of timetabled classwork contact. There is too much emphasis in class teaching on description and on the transmission of information. Partly as a result, students are passive and staff often have too low an expectation of their capabilities. Students themselves rely almost wholly on lecture notes and there is a failure to use textbooks, the library and other source material. Staff teach too directly from syllabuses or stated objectives and, as a consequence, lose interest in the overall development of a subject. There is an inadequate amount of experimental and investigatory work.

129. If these conditions are to be improved, then the day should be divided into shorter sessions utilising a variety of teaching styles and learning methods. More attention needs to be given to organising the learning so that students' interests are fully engaged and the lesson planning incorporates student participation. On some courses there is an urgent need for more emphasis on learning by assignments and for more 'learning by doing' through practical work. More project work should be encouraged, and there should be much greater encouragement of learning through private study and by the use of library and other resources, so that the responsibility for learning is more firmly placed upon the student.

130. There is a need for colleges to develop small group work as a channel for directed study, discussion and exploration. Subjects need to be taught in a more unified way and less as an amalgam of isolated topics and teachers should be more flexible in interpreting subject matter, using the syllabus and the stated objectives as guidelines.

131. More attention needs to be given to devising and using forms of assessment which explore understanding, cultivate the ability to formulate answers, solve problems and develop the ability to use language effectively.

132. The deficiencies, which occur in the education provided for these students are not just a function of poor pedagogy although the need for appropriate training and staff development is clear. Broad and more general aims of courses suffer because too many teachers assume that validating bodies have prescribed aims and methods. This belief prevents them from taking advantage of the considerable autonomy available to them in the interpretation of syllabuses. Validating bodies often do give the impression of being prescriptive: they may not set out to prevent staff initiative but they do very little to encourage it. Freedom for teachers to make their own interpretation of the syllabus is not, in itself, enough. The link between what students learn on-the-job and off-the-job needs to be improved. This means that employers and colleges need to be clear about what each can best deliver and make a more determined effort to use work settings as the base for learning and to engage current practitioners in industry and commerce as lecturers, on a part-time basis.

133. Employers and others, including students, are concerned about the validity of standards, particularly in relation to TEC. Employers need better information about awards and standards and, where possible, these results should include detailed profiling of student attainment. Wherever feasible, employers should be involved in assessment procedures. Although assessments are conscientiously carried out there is concern that too much attention is devoted to recalling information and that the content and style of teaching are influenced too strongly by assessment requirements.

134. Such new practices in teaching and assessing invariably require careful consideration by staff concerned. It can be beneficial in terms of staff development, for teachers to work together as a team for the writing and fulfilment of learning objectives and the devising and implementation of assignments. There are particular problems for the staff involved in teaching subjects which are not confined to specific courses: general and communication studies

and mathematics are examples of these. There is a need for the staff involved in teaching these subjects to be seen as partners in curriculum development, not merely in a servicing role. Such curriculum development groups should seek assistance from, and establish links with, local industry and commerce to ensure that course objectives and content are relevant to the students' vocational needs and experience. Advisory committees should be recast in a more specialised form. The varied approaches to syllabus design and curriculum implementation entailed by different examining bodies have placed a heavy work load upon some college staff and senior management in colleges should find ways of supporting them. Course leaders have a vital role here although their duties are not always defined sufficiently. Only a few colleges had a planned system of monitoring their work and such procedures are increasingly important.

135. Further education colleges are generally provided with adequate accommodation and consumable materials to meet the needs of part-time release students. However, the replacement of capital equipment has become increasingly difficult because of its high cost and the purchase of the expensive equipment associated with the new technologies has not kept pace with need. If the best use is to be made of college equipment and if students are to benefit to the full from practical activities and project work, well trained technicians are needed. The present ratios of full-time equivalent technicians to full-time equivalent teachers are not always high enough to maintain an adequate level of service. In particular, where colleges are not even staffed up to establishment, students are unlikely to get enough opportunities to do good practical work during their time at college. Colleges and LEAs may wish to consider what redeployment of staff might be possible to improve the position.

136. The pattern of vocational education for students released from employment has altered considerably over the past two decades. It now consists of a wide but loosely knit range of courses that cater for a considerable diversity of students but it is becoming increasingly difficult to identify course content which is relevant to the demands of specific jobs. In an attempt to accommodate the wide range of individual experience found amongst part-time

students, a plethora of courses has been created; in consequence, there is fragmentation and unnecessary duplication of provision in some vocational areas.

137. Pre-enrolment careers education and guidance also needs considerable overhaul and the enrolment process itself should be less perfunctory so that students have a clear indication of the course on which they are enrolling.

138. Examination failure is not the primary cause of the relatively low numbers completing part-time release courses. During the progress of their course students withdraw for a variety of reasons with the consequence that overall pass rates for courses of 2 to 3 years duration are often low. For example in TEC science certificate courses only 30 per cent of those who initially enrolled on the courses inspected obtained a certificate. Colleges should analyse the reasons for this loss of students so that they may take appropriate action to improve overall success rates.

Appendix 1

List of main courses inspected.

Business studies

BEC General

BEC National

Construction

CGLI 588 Craft Certificate in brickwork

CGLI 585 Craft Certificate in carpentry and joinery

CGLI 594 Craft Certificate in painting and decorating

CGLI 596 Craft Certificate in plumbing

TEC Certificate in building studies

TEC Certificate in civil engineering studies

TEC Certificate in building engineering services

Engineering

CGLI 165 Welding craft practice

CGLI 200 Basic engineering craft studies

CGLI 205 Mechanical engineering-craft studies

CGLI 207 Refrigeration mechanic, craft studies

CGLI 215 Welding engineering craft studies

CGLI 216 Fabrication craft studies (sheet metal and thin plate)

CGLI 217 Fabrication craft studies (thick plate)

CGLI 224 Electronics servicing

CGLI 232 Electrical and electronic craft studies

CGLI 235 Electrical installation 'C' certificate

CGLI 236 Electrical installation craft studies

CGLI 240 Shipbuilding craft studies

CGLI 380 Basic motor vehicle servicing craft studies

CGLI 381 Motor vehicle craft studies

CGLI 390 Motor vehicle technicians

TEC Certificate (A1) General engineering

TEC Certificate (A2) Telecommunications

TEC Certificate (A3) Electronics

TEC Certificate (A3) Electrical Engineering

TEC Certificate (A2/A3) Electrical and electronic engineering

TEC Certificate (A4) Plant maintenance

TEC Certificate (A5)	Mechanical/production engineering
TEC Certificate (A6)	Fabrication
TEC Certificate (A7)	Shipbuilding
TEC Certificate (A8)	Motor vehicle technicians
TEC Certificate (A9)	Aerospace studies
TEC Certificate (B3)	Refrigeration engineering
TEC Certificate (B3)	Building engineering services

Food

CGLI 706 Parts 1 and 2 cookery for the catering industry (or equivalent Regional Examining Body)

CGLI 120 Parts 1 and 2 Bakery

Hairdressing

CGLI 760/1 Hairdressing Certificate

CGLI 760/2 Advanced Studies Certificate in hairdressing

Industrial sciences

CGLI 738 Dispensing technicians

TEC Certificate in science

Appendix 2

The timetabling of the college day

The following examples were encountered during the inspection:

Business studies

BEC General Certificate

People and communication	2 hours
Business calculations	1 hour
World of work	2 hours
Either Typewriting or book-keeping	2 hours
Total	7 hours

BEC National Certificate

Core modules	{	People and communication	2 hours
		Numeracy and accounting	2 hours
		Organisation in its environment	2 hours
		Tutorial	1 hour
Option modules	{	Year I Statistics <i>or</i> Data processing	2 hours
		Year II One from:	each
		Marketing	2 hours
		Business law	2 hours
		Banking	2 hours
Total			9 hours

Engineering

CGLI 165 Fabrication and welding craft practice

English and general studies	1 hour
Welding craft practice	1¾ hours
Welding practice	4¼ hours
Laboratory/related studies	1½ hours
Total	8½ hours

CGLI 380 Motor vehicle craft studies (light vehicles)

Automobile technology	1½ hours
Laboratory practice	1¼ hours
Craft theory	1 hour
Associated studies	2 hours
General studies	1 hour
Total	6¾ hours

TEC Electronics (Certificate)

Mathematics	1½ hours
Physical Science	1½ hours
Material and workshop practice	1½ hours
Electrical drawing	1½ hours
Electrical systems	1½ hours
General and communication studies	1½ hours
Total	9 hours